

WHAT IS CLAIMED IS:

1 1. A method for differentiating a cancer risk status of milk ducts in a breast comprising:
2 aspirating the nipple, and
3 locating at least one ductal orifice that yields fluid upon aspiration; wherein a duct that
4 yields fluid upon aspiration is at higher risk for cancer.

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6 2. A method as in claim 1, further comprising accessing the ductal orifice that yields
7 fluid.

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9 3. A method as in claim 2, further comprising retrieving ductal contents from the
10 accessed duct.

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12 4. A method as in claim 1, wherein more than one duct yields fluid upon aspiration of the
13 nipple.

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15 5. A method as in claim 4, wherein each duct that yields fluid upon aspiration is
16 accessed.

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18 6. A method as in claim 5, further comprising retrieving ductal contents from an
19 accessed duct.

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21 7. A method as in claim 1, further comprising recording the location of the ductal orifice
22 once identified by yield of fluid at the orifice.

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24 8. A method as in claim 7, wherein recording comprises one or more of transcribing the
25 relative location of the ductal orifice on a paper grid, taking a photograph, recording in real time
26 on a digital screen the fluid yielding event and/or location of the ductal orifice that yielded fluid,
27 and making a negative imprint on the nipple surface to identify the regions of the nipple that did
28 not yield fluid.

30 9. A method as in claim 1, further comprising marking the ductal orifice upon yield of
31 fluid at the orifice.

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33 10. A method as in claim 9, wherein marking comprises making an identifiable mark
34 with a pen or other labeling device to identify the spot comprising the ductal orifice at a later
35 time.

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37 11. A method as in claim 9, wherein marking comprises placing an element into the duct
38 selected from the group consisting of a plug, tube, wire, thread, and suture.

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40 12. A method as in claim 10, wherein the mark resides on the nipple surface in a range of
41 time from a few hours to a few years.

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43 13. A method as in claim 1, further comprising contacting a ductal orifice that yields
44 fluid with a dilator in order to accomplish one or more of discerning the precise location of the
45 orifice, discerning the orientation of the orifice, or enlarging the proximal area of the duct so as
46 to facilitate subsequent cannulation of the duct.

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48 14. A method for differentiating a cancer risk status of milk ducts in a breast comprising:
49 aspirating the nipple, and
50 locating at least one ductal orifice that yields fluid upon aspiration; wherein a duct that
51 yields fluid upon aspiration is at higher risk for cancer; and
52 collecting a bead of fluid at the nipple surface generated from aspiration and emerging
53 from the fluid yielding duct and not mixed with fluid generated from any other duct on the
54 nipple surface.

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56 15. A method as in claim 14, further comprising analyzing the collected fluid of the duct
57 yielding fluid separately from the fluid of any other duct yielding fluid.

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59 16. A method as in claim 14, further comprising recording the location of the ductal
60 orifice on the nipple surface once identified by yield of fluid.

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62 17. A method as in claim 16, wherein recording comprises one or more of transcribing
63 the relative location of the ductal orifice on a paper grid, taking a photograph, recording in real
64 time on a digital screen the fluid yielding event and/or location of the ductal orifice that yielded
65 fluid, and making a negative imprint on the nipple surface to identify the regions of the nipple
66 that did not yield fluid.

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68 18. A method as in claim 14, further comprising marking the ductal orifice upon yield of
69 fluid at the orifice.

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71 19. A method as in claim 18, wherein marking comprises making an identifiable mark
72 with a pen or other labeling device to identify the spot comprising the ductal orifice at a later
73 time.

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75 20. A method as in claim 18, wherein marking comprises placing an element into the
76 duct selected from the group consisting of a plug, tube, wire, thread, and suture.

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78 21. A method as in claim 19, wherein the mark resides on the nipple surface in a range of
79 time from a few hours to a few years.

80
81 22. A method as in claim 14, further comprising contacting a ductal orifice that yields
82 fluid with a dilator in order to accomplish one or more of discerning the precise location of the
83 orifice, discerning the orientation of the orifice, or enlarging the proximal area of the duct so as
84 to facilitate subsequent cannulation of the duct.

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87 23. A kit for differentiating a cancer risk status of milk ducts in a breast comprising a
88 nipple aspiration device, a system to mark and/or record the location of a ductal orifice that
89 yields fluid upon aspiration, and instructions for use of the kit to differentiate a cancer risk status
90 of milk ducts in a breast by locating at least one ductal orifice that yields fluid upon aspiration.

92 24. A kit as in claim 23, further comprising a ductal access tool and further instructions to
93 access the duct that yields fluid upon nipple aspiration.

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95 25. A kit as in claim 23, wherein the system to mark and/or record the location of the
96 ductal orifice that yields fluid upon aspiration comprises one or more of a pencil and graph
97 paper, a camera, a marking tool, a digital recording and imaging device, a system to make a
98 negative imprint on the nipple surface, and an element to place in the orifice to mark it.

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100 26. A kit as in claim 24, further comprising a dilator.

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102 27. A kit for differentiating a cancer risk status of milk ducts in a breast comprising a
103 nipple aspiration device, a ductal access tool to access a duct through a ductal orifice that yields
104 fluid upon nipple aspiration, and instructions for use of the kit to differentiate a cancer risk status
105 of milk ducts in a breast by locating at least one ductal orifice that yields fluid upon nipple
106 aspiration and access the duct through its orifice.

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108 28. A kit as in claim 27, further comprising a dilator.

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110 29. A kit for differentiating a cancer risk status of milk ducts in a breast comprising a
111 nipple aspiration device, a tool to retrieve an emerging bead of fluid at a ductal orifice, and
112 instructions for use of the kit to differentiate a cancer risk status of milk ducts in a breast by
113 locating at least one ductal orifice that yields fluid upon nipple aspiration and instructions for
114 collecting an emerging bead of fluid at the ductal orifice without mixing the collected fluid with
115 any other fluid yielded from any other duct.

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117 30. A kit as in claim 28, further comprising a dilator.

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119 31. A method of maximizing the likelihood of ductal fluid migrating to the nipple
120 surface
121 upon nipple aspiration comprising:
122 stimulating the breast and/or nipple surface prior to or during nipple aspiration.

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32. A method as in claim 31, wherein stimulating comprises placing a wearable device
in contact with the nipple surface.